Spring 1998 Number 6

ENVIRONMENTAL REPORT

U.S. ARMY SOLDIER SYSTEMS COMMAND • NATICK LABS • NATICK, MASSACHUSETTS

Restoration Advisory Board Tours the Treatability Study Building

On November 25, 1997, approximately 12 members of the Restoration Advisory Board (RAB) *(See page 5 for more information.)* toured and inspected the newly completed building that houses the equipment for the Treatability Study. The Treatability Study will evaluate how well the proposed water treatment system, which includes an **air stripper** and **carbon adsorption** units, will contain and remove dissolved solvents from underground water beneath the Warehouse Area. The study also will provide data needed to determine the best operating conditions for the system.

Frank Ricciardi explains the treatment process to RAB members.

Study Underway

The Treatability Study began in November 1997. Two **extraction wells** pump the affected underground water into the air stripping and carbon adsorption equipment where the dissolved solvents are treated and removed. As a safety precaution, the extraction well pumps cannot run without passing the water through the treatment equipment. Additionally, the water is sampled before and after treatment to ensure that the dissolved solvents were successfully removed. Water is continuously released through the storm outfall and samples assure that the water discharge meets all standards. The outfall is located on the eastern side of the installation.

The Treatability Study will evaluate how well the proposed treatment system will contain and remove dissolved solvents from underground water beneath the Warehouse Area.

The Treatability Study also will provide data needed to fine tune and improve the system, including:

Underground water level measurements that will indicate how well the system contains the dissolved solvents;

Analysis of dissolved solvent levels in untreated and treated underground water to ensure that the system meets regulatory requirements; and

Analysis of metals' levels, pH, and conductivity in underground water to identify any operational changes needed to make the system more efficient.

Next Steps

After the study is complete, U.S. Army Soldier Systems Command (SSCOM), U.S. Environmental Protection Agency (EPA) and Massachutes Department of Environmental Protection (DEP) will review the data and will make it available to the public in the Information Repositories. *(See Information Repositories on page 2.)* We encourage you to examine and comment on this data. We will carefully consider your comments before making a final decision on whether to continue using the water treatment system or to investigate other treatment technologies.

Please see page 5 for definitions of words in ***bold****.*

Printed on recycled paper (15% post-consumer waste fiber, 35% pre-consumer waste fiber).

ATSDR Finds Natick Drinking Water Safe

In response to community concern, the Agency for Toxic Substances and Disease Registry (ATSDR) conducted a **Health Consultation** to examine the possible health effects from potential past exposure to **perchloroethylene** (PCE) and **trichloroethylene** (TCE) in the town of Natick's public drinking water. The consultation examined potential exposure from the late 1980's to the early 1990's through the following pathways:

- drinking,
- inhalation (breathing), and
- contact (i.e. showering).

ATSDR concluded that potential exposure to Natick's public water supply in the late 1980's and the early 1990's did not result in harmful health effects. Levels of PCE and TCE detected in the town's public water supply were considerably lower than levels shown to cause harmful effects in studies of comparable communities, workers, and in laboratory animals exposed to these chemicals. Although increased levels of PCE were detected in one Natick public water supply well, Evergreen Well No. 1, water pumped from this well routinely was blended with water from several other public wells before being sent to households. Blending water supplied by Evergreen Well No. 1 with water from several other public wells lowered the levels of PCE present in the drinking water supply to acceptable public health standards. As a precautionary measure, the town of Natick discontinued using Evergreen Well No. 1.

Current sampling results indicate there are no health concerns associated with the town of Natick's drinking water supply. The town's water supply continues to meet acceptable drinking water standards set by the U.S. Environmental Protection Agency (EPA).

ATSDR is a Federal health agency established by Congress under Superfund law. The Agency's mission is to prevent exposure to hazardous substances from waste sites, unplanned releases, and other sources of pollution in the environment.

Health Assessment Update

ATSDR also completed a draft **Health Assessment** on the SSCOM Site in May 1997. The draft Health Assessment concluded that:

- Underground water near the site does not pose a public health hazard;
- Lake Cochituate is safe for recreational activities;
- Soil and dust blown from the SSCOM Warehouse Area do not pose a public health hazard; and
- Eating fish from Lake Cochituate is not recommended for sensitive populations (i.e. pregnant or nursing women and children under 12 years old).

The draft Health Assessment has been available for public review in the Information Repositories since May 1997. The public comment period on the draft Health Assessment ended on December 1, 1997. Currently, ATSDR is reviewing the comments and preparing responses.

Please Visit the Information Repositories

The following information repositories are open to the public and contain major reports and documents related to the cleanup.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup Federal Facilities
1 Winter Street, 7th Floor
Boston, MA 02108
(617) 292-5732

Morse Institute
14 East Central Street
Natick, MA
(508) 651-7300
Reference Section

US Army Soldier Systems Command
Environmental, Safety and Health Office
Building 4, Room D-011
Kansas Street
Natick, MA 01760
(508) 233-5550

Natick Board of Health
Town Hall
13 Central Street
Natick, MA
(508) 651-7244
Ask for Roger Wade

Answers to Your Questions

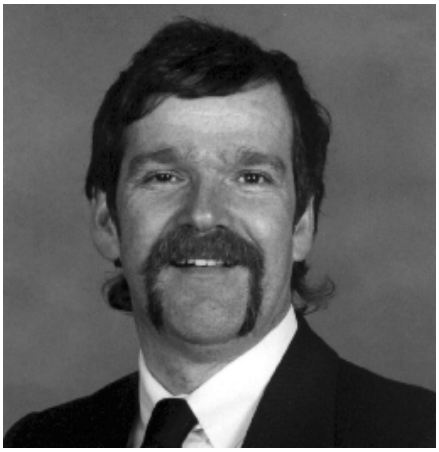
When do you expect the Springvale well field to be affected by underground water in the Warehouse Area?

We currently are studying the effectiveness of the proposed treatment system for underground water beneath the Warehouse Area. This treatment system will contain and remove dissolved solvents from the underground water at this area so that these dissolved solvents may never reach the Springvale Well. *(See RAB Tours the Treatability Study Building on page 1.)*

Because the underground water that contains dissolved solvents is moving very slowly, we are concentrating on implementing the treatment system rather than determining when the concentration might reach the Springvale Well. We want to have the treatment system in place, treating the underground water, and preventing the concentration of dissolved solvents from spreading so that it will not reach the Springvale Well. We will continue to sample surrounding monitoring wells in order to track the effectiveness of the treatment facility.

Are there any plans to sample Fisk Pond?

Yes. Fisk Pond, Little Roundy Pond, Middle Pond, and North Pond of Lake Cochituate were sampled during the recently completed remedial field investigation work. A map describing the sampling points will be included in the Remedial Investigation Report, currently scheduled for completion this fall. *(See Field Investigation Work Continues on page 4.)*



Mr. John J. McHugh, an environmental engineer, is SSCOM's Project Officer for Environmental Restoration. He is happy to answer your questions.

Does the contamination at the site affect trees?

No. There is no evidence to date that the dissolved solvents in the underground water at the Warehouse Area have affected trees in the Natick Community. The affected underground water is approximately 40 to 60 feet below ground level, well below the average root depth.

Although the investigation of the Former Proposed Gym Site is ongoing, there also is no evidence to date that the contamination there has affected trees.

How can I get more detailed technical information than is presented in this newsletter?

Because of the diverse audience, we have to be careful not to be too technical. Most of the recent comment cards indicated that this newsletter is informative and at the right level of detail. However, if you need more detailed technical information, please visit one of the information repositories listed on page 2, attend a RAB meeting, or contact any of the representatives listed below or a RAB member in the community. Also, if you have specific technical questions, please send them in on a comment card and we will address them in an upcoming newsletter.

How to Contact Us

SSCOM
John McHugh (508) 233-5550
[jmchugh@natick-emh2.army.mil]
fax: (508) 233-5393

Colleen Jacquet (508) 233-4300
[cjacquet@natick-emh2.army.mil]

Massachusetts Department of Environmental Protection
Robert Campbell (617) 292-5732
[Robert=Campbell%BWSC=RR%DEP=Boston@im.state.ma.us]
fax: (617) 292-5530

U.S. Army Environmental Center
Dean Hutchins (410) 612-6855
[dwhutchi@aec1.apgea.army.mil]
fax: (410) 612-6836

U.S. Environmental Protection Agency
Jerry Keefe (617) 223-5532
[keefe.jerome@epamail.epa.gov]
fax: (617) 573-9662

Technical Assistance Grants
Mike McGagh (617) 223-5534

ATSDR
Susanne Simon (617) 223-5526

Storage Area Soil Removal Completed

The U. S. Army Corps of Engineers (Army Corps) completed the removal of pesticide-containing soil from the 2,400-foot Storage Area along the west side of the tennis court in the Warehouse Area.

In response to community concern, SSCOM handed out fliers to local residents to notify them of when the work would begin. The Army Corps' contractor regularly sampled and tested the air and performed dust control measures to protect workers and nearby residents. All excavated soil was covered with plastic and weighted down with sand bags to prevent exposure to the wind and rain.

After digging up an area, the Army Corps tested the remaining soil for contaminants. If additional contamination was detected, the Army Corps continued to excavate the area until all soil results came back clean.

The U.S. Army Corps of Engineers removed pesticide-contaminated soil from the Storage Area.

In response to community concern, the contaminated soil was transported and disposed of at a landfill in Plainville, Massachusetts between December 4 and 8, 1997. The excavated area has been filled with clean soil and then paved for use as a parking lot. Site activities were completed on December 12, 1997. SSCOM presented a slide show of the complete operation at the January 7th RAB meeting. The operation is complete except for filing and review of the completion report.

Field Investigation Work Continues

Environmental specialists use many sampling methods to collect information on soil, sediment, water and groundwater conditions to define the best cleanup methods for a site.

In September, SSCOM, EPA and DEP approved the work plan for field investigation work at the Former Proposed Gym Site and the SSCOM Water Supply Well Site. Field investigation work began on October 14, 1997 and was completed on January 8, 1998. The field investigation work will help identify the source of contamination in these areas.

Completed Work

To date, SSCOM has completed a geophysical survey to identify existing underground water conditions and has taken a number of soil, underground water, surface water, and sediment samples.

Next Steps

Next steps include:

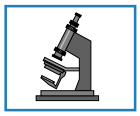
- analyzing all samples for organic and inorganic compounds;
- conducting a quality control and quality assurance (QA/QC) of the sampling results to ensure the integrity of the samples; and
- preparing a draft Remedial Investigation (RI) report that will summarize the results of the field investigation.

The draft Remedial Investigation report is expected to be completed this fall.

RAB Update

The Restoration Advisory Board (RAB), comprised of Natick town officials, personnel from the Army, EPA, and DEP, and interested community volunteers, works together to address issues related to the SSCOM - Natick Site. Following is a summary of the items discussed at the last several meetings:

June 24, 1997



John Snowden, ABB Environmental Services, discussed proposed field investigation work for the Former Proposed Gym Site and the SSCOM Water Supply Wells. *(See Field Investigation Work Continues on page 4.)* Mark Applebee, U.S. Army Corps of Engineers, discussed removal activities at the Storage Area.

September 23, 1997

John McHugh announced completion of the building that houses the Treatability Study equipment and discussed next steps, including a tour of the building for RAB members. *(See Restoration Advisory Board Tours the Treatability Study Equipment Building on page 1.)*

October 29, 1997

ATSDR representative Dr. Brenda Weis, Ph. D., presented the results of the draft health consultation on potential exposure to PCE and TCE in the Natick public water supply and answered questions. *(See ATSDR Finds Natick Drinking Water Safe on page 2.)*

November 25, 1997

RAB members toured the Treatability Study building and examined the equipment being tested. RAB members toured the on-site lab being used for analysis of samples from the Treatability Study and the remedial investigation efforts. Frank Ricciardi, Arthur D. Little Inc., gave a step-by-step presentation on the treatment process.

A. Richard Miller discussed the preliminary findings of the Natick Cancer Task Force Study. The Task Force is continuing to collect data in order to reach sound conclusions.

Future RAB Meeting

June 24, 1998

Begins at 7 p.m. at the Officers' Club

ENVIRONMENTAL OPEN HOUSE PLANNED FOR MAY 14, 1998

We are planning to hold another Environmental Open House this spring. SSCOM staff and experts will be available to discuss both general and specific concerns about site clean-up activities.

Definition of Environmental Terms

Air Stripper: Equipment that forces air through contaminated water to cause the contaminants to volatize or evaporate. Air stripping is a very effective way to treat water containing volatile organic compounds such as PCE and TCE.

Carbon Adsorption: A purification process in which water is passed through carbon units. Contaminants in the water leave the water and attach or adsorb to the carbon. The carbon units are recycled periodically to ensure their continued effectiveness.

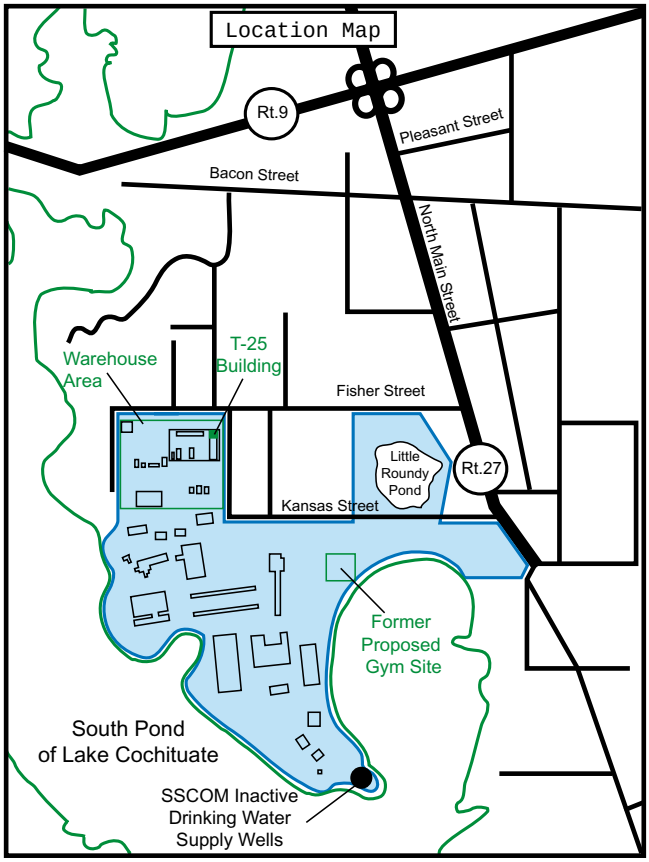
Extraction Wells: Wells designed to remove underground water for treatment.

Health Assessment: A type of study conducted by ATSDR that examines the potential harmful effects of specific media, such as under ground water, on a community.

Health Consultation: A type of study conducted by ATSDR that examines historical data to determine whether past exposure to specific media, such as underground water, may have potential harmful effects on a community.

Perchloroethylene (PCE): A chemical commonly used in dry cleaning. Exposure may cause health problems in animals. EPA currently is reviewing its classification as a probable human carcinogen. PCE is also known as tetrachloroethylene.

Trichloroethylene (TCE): A chemical used for degreasing and dry cleaning. TCE has been shown to cause liver, kidney, and neural damage.



SSCOM Study Areas

Warehouse Area

The Warehouse Area is located at the north end of the SSCOM installation. The area in front of the T-25 building is under investigation because dissolved solvents and degreasers (TCE and PCE) have been found at levels higher than drinking water standards in underground water 30 to 62 feet below ground surface. Current data indicates that the movement of this water is very slow and that affected water is likely to be contained close to the Warehouse Area. The Treatability Study will provide data needed to better understand underground water movement.

Former Proposed Gym Site

The Former Proposed Gym Site is located south of the entrance to the SSCOM installation. Construction workers noticed a petroleum odor in the soil when preparing to build a new gymnasium. Low concentrations of various chemicals were found in the soil. The source of these chemical concentrations is unclear since the area was previously used as a helicopter pad and is next to a public sewer line that occasionally overflows in the spring. SSCOM is currently investigating the nature and extent of contamination at the site.

SSCOM
Environmental Report

Environmental, Safety and Health Office
Building 4, Room D-011
U.S. Army Soldier Systems Command
Kansas Street
Natick, MA 01760-5049

Bulk Rate
U.S. Postage
PAID
Natick, MA
No. 115

Inside This Issue:

Environmental, Safety and Health Office
Building 4, Room D-011
U.S. Army Soldier Systems Command
Kansas Street
Natick, MA 01760-5049

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 29 Natick, MA

Postage will be paid by addressee

U.S. Army Soldier Systems Command
AMSSC - S - ENS
15 Kansas Street
Natick, MA 01760-9916

We Want to Hear From You

Your opinions and suggestions make it easier for us to give you the information you need.
Name/Address

Future Newsletters - we send newsletters to people on our mailing list. Please indicate if you would like to be added or removed from the mailing list or if your mailing address has changed.

_____ Please add me to the mailing list
_____ Do not send me future newsletters
_____ My mailing address has changed

This newsletter is:
_____ Very interesting
_____ Somewhat interesting
_____ Not of interest to me

The information in this newsletter is:
_____ Too simplistic
_____ About the right level
_____ Too difficult and technical

Comments, questions or suggestions for future newsletters or regarding the cleanup program:

_____
_____
_____
_____
_____

Thank you for your opinions and your time. **We look forward to hearing from you.**